



# **One NASA Cost Engineering Database (ONCE)**

## **Overview & Update**

**2018 NASA Cost Symposium**

**NASA: James K Johnson and Eric Plumer**

**SAIC: Mike Blandford and Julie McAfee**

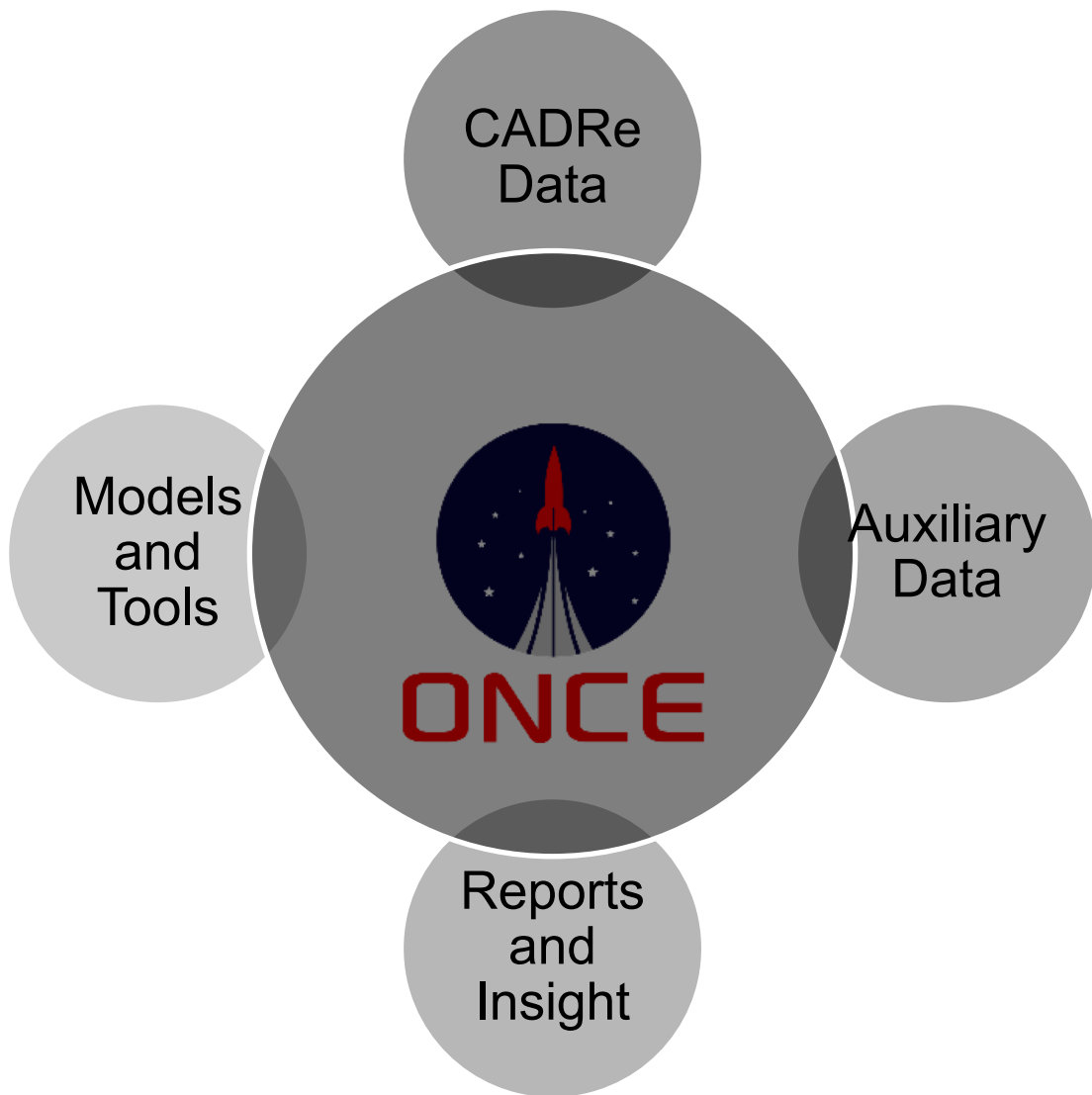


# Main Presentation Agenda

- **ONCE and CADRE Background**
  - Brief overview
- **By the Numbers**
  - CADRe Dashboard, Download Dashboard, User Dashboard, and Model Downloads
  - Numbers Summary
- **ONCE Enhancements**
  - ASCoT
  - Estimate vs Actuals
  - Human/Crewed Database
  - Additional Data Enhancements:
    - Review of Phased Launch Vehicle Costs per Project
    - Cleanup of WBS specification for Contingency/Reserves values
    - Cleanup of all WBS elements shown on User Reports screen
    - Identified inconsistencies in Instrument element type assignments.
    - Completed Instrument Mass review
- **Conclusion**

*ONCE Breakout Session:  
Thursday from  
1330 to 1430hrs at  
B34 R120B*

# Last Time(s)...



- ONCE 2.0 is significant improvement and puts the database at the center of ~~CAD's~~ **OCFO SID** efforts to build and improve the NASA community.
- ONCE is now the center of **OCFO SID's** efforts to empower analysts and improve cost estimating at NASA by providing access to:

- **CADRe Data**

- Active filtering for custom user reports
- CADRe Library

- **Auxiliary Data**

- Normalized datasets
- **OCFO Data**

- **Reports and Insight**

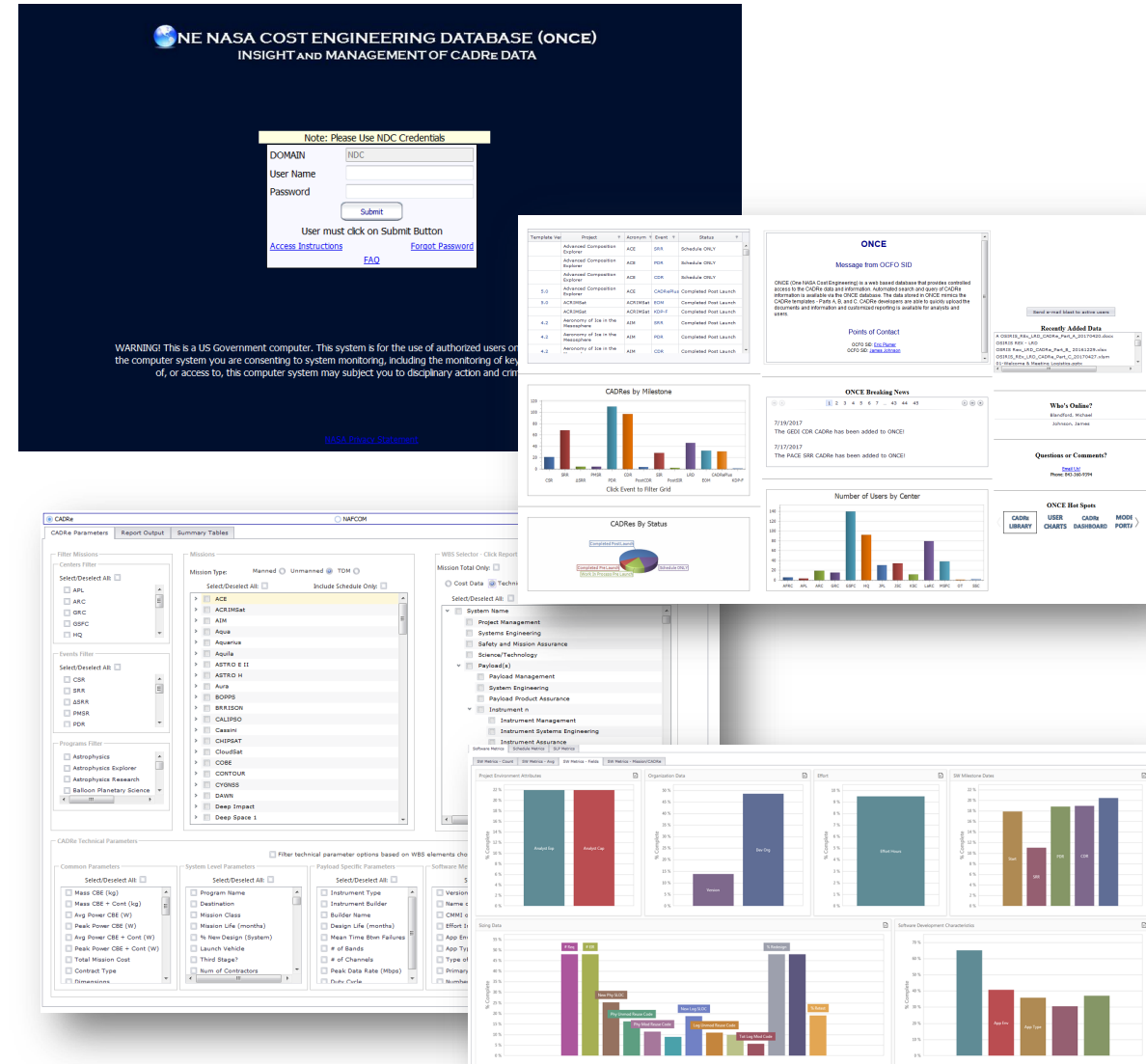
- Dynamic graphical & tabular reports
- Structured database reporting

- **Models and Tools**

- Model Portal sharing access across community
- **Online Models**

# What is ONCE?

- The ONCE Database (aka <https://oncedata.msfc.nasa.gov>, aka “ONCE”) is a government website managed by HQ OCFO SID that provides access to technical, cost, and other programmatic information about NASA Projects.
- The data primarily comes from CADRe documents which have a Part A, B, and C
  - Part A = Long narrative (MS Word doc)
  - Part B = Technical Data (MS Excel file)
  - Part C = Cost/Programmatic Data (MS Excel file)
  - CADRe is the Agency’s formal cost data collection initiative as outlined NPD 71205.E. CADRe is paid for by SID and performed during KDP’s on Projects.
- The website provides a user interface to search and retrieve data from the CADRe’s
  - Enables analysts and estimators to quickly build analogy datasets, perform historical analysis, develop cost estimating relationships, etc.
- Users can output the data retrieved from ONCE to MS Excel for their own specific analysis needs
  - Project estimation, independent estimation, research, proposal development, etc.







# ONCE BY THE NUMBERS



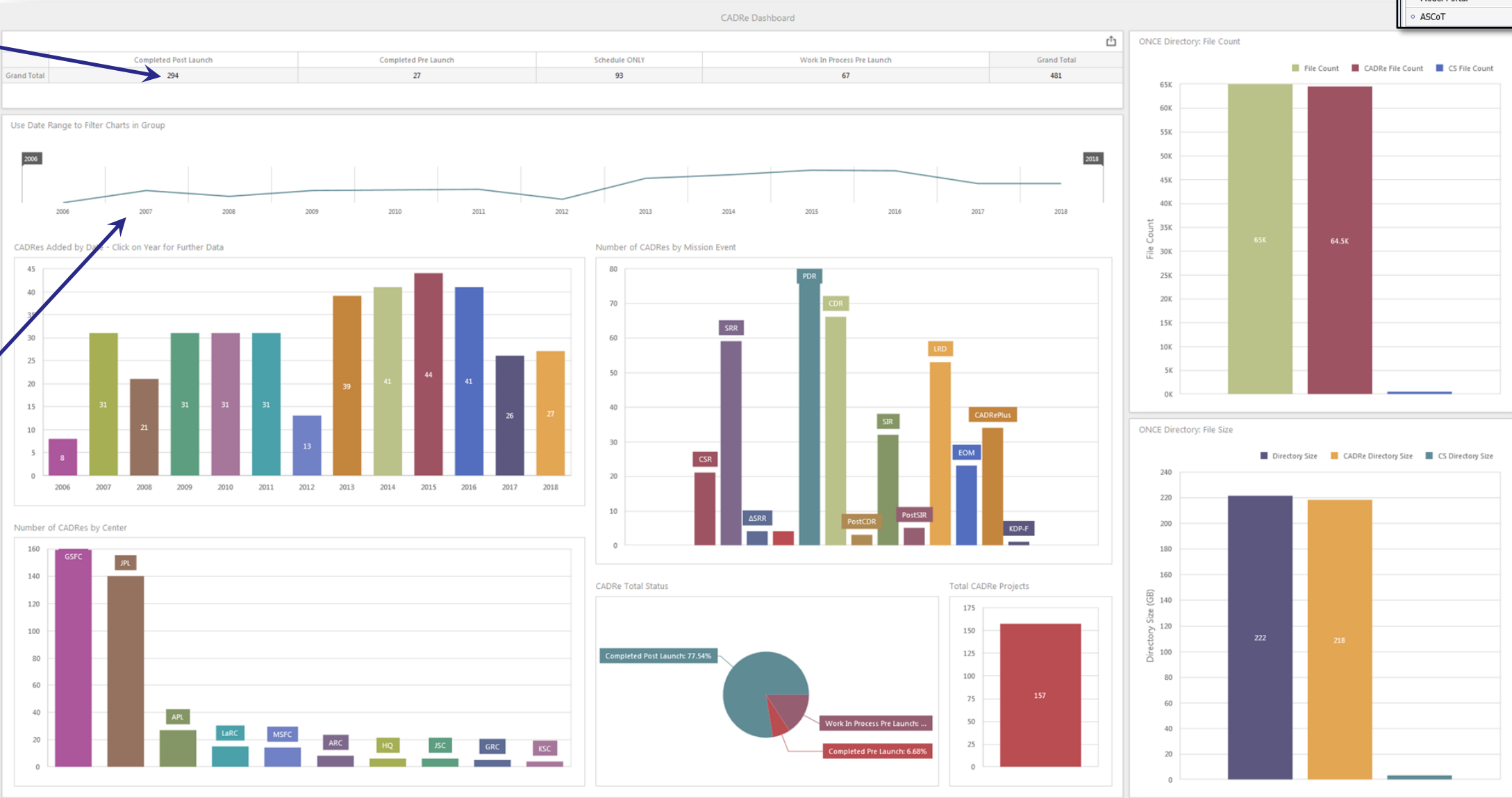
# CADRe Dashboard

- Search
- User Reports
- User Charts
- Libraries
- **Dashboards**
- Family Box Plots
- Status Screen
- Model Portal
- ASCoT

481 Total  
CADRe's,  
294  
Completed  
Post-  
Launch

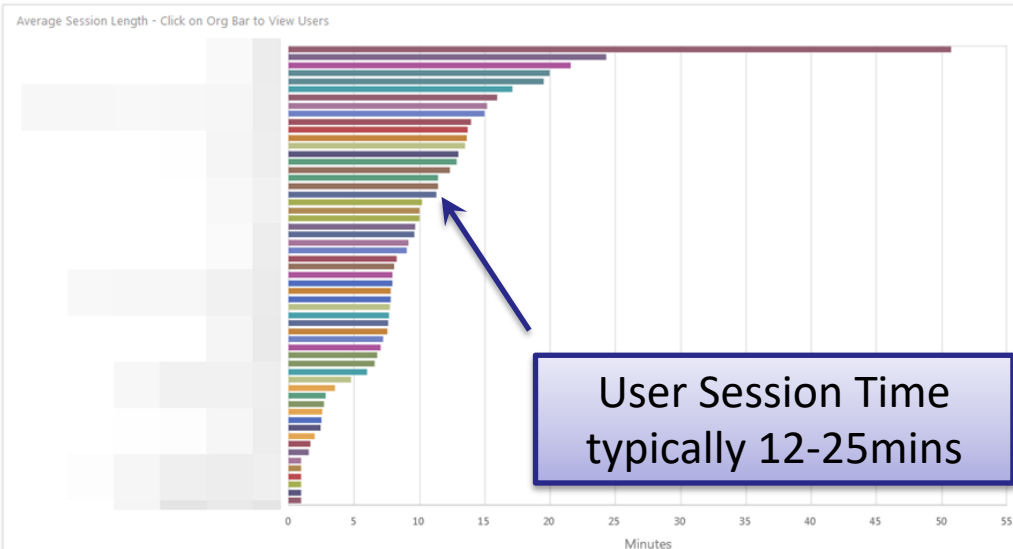
CADRe's  
Added by  
Year

218GB  
65K Files!



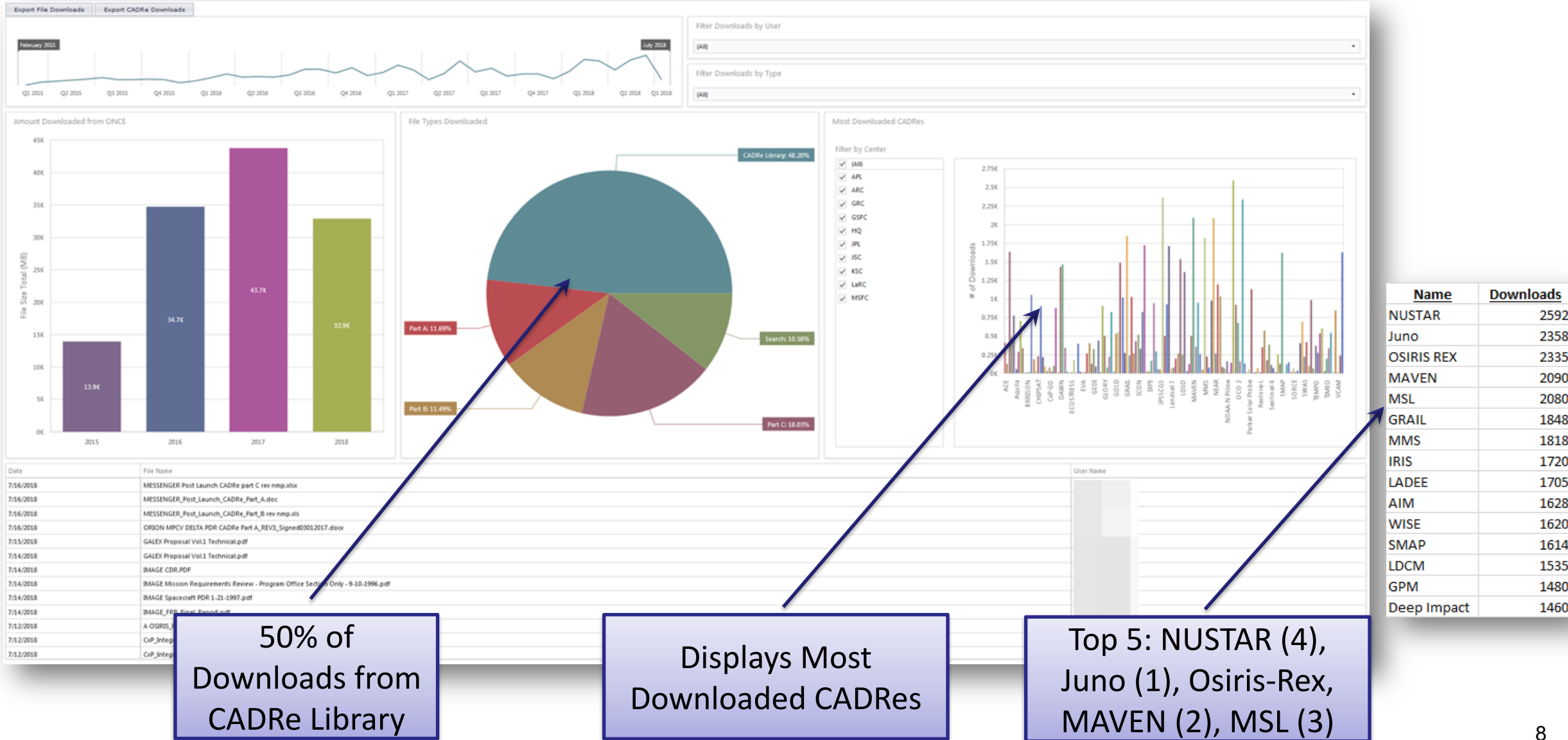


Average  
Yearly  
Growth  
15%



User Session Time  
typically 12-25mins

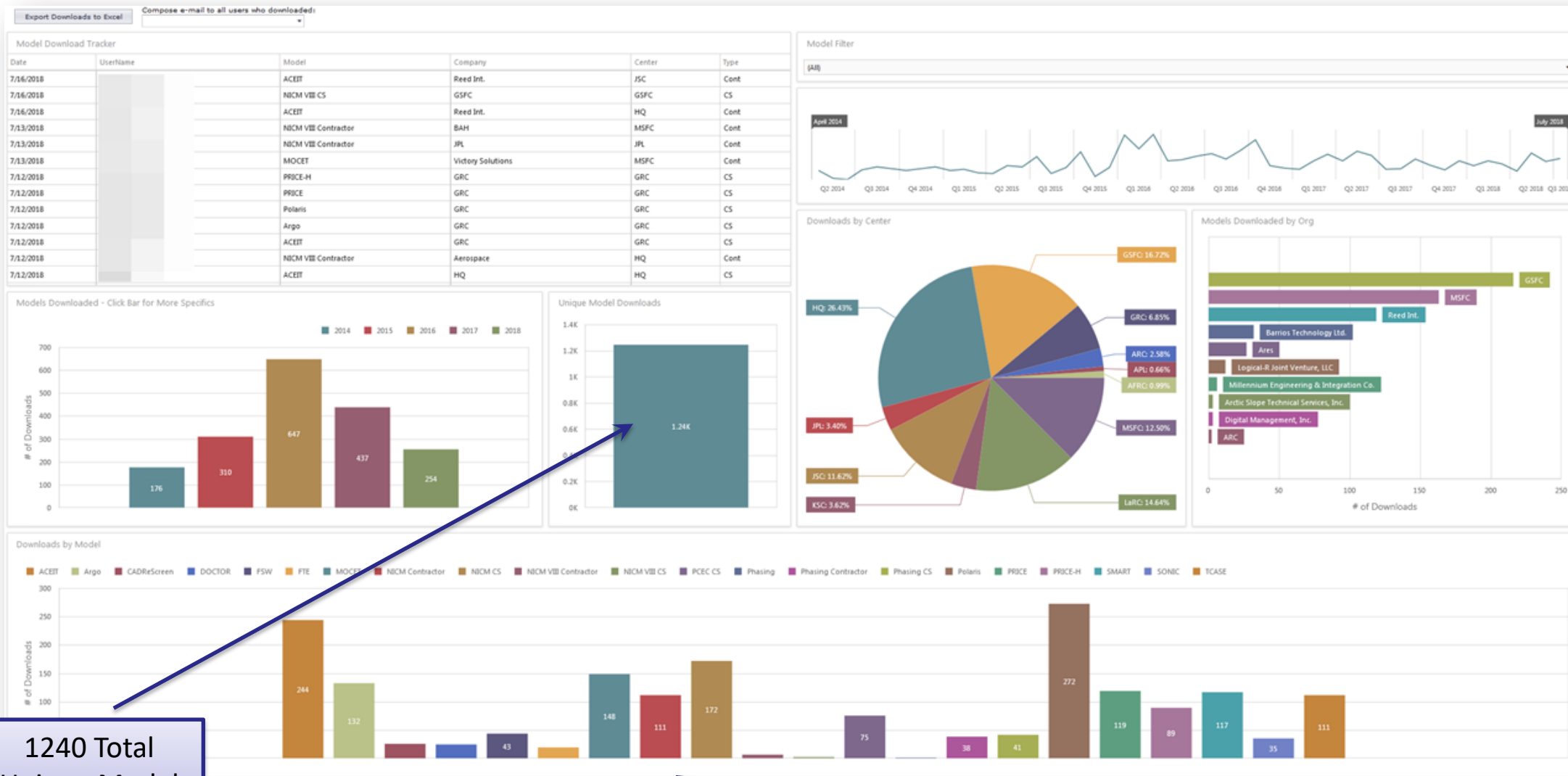
# Downloads Dashboard





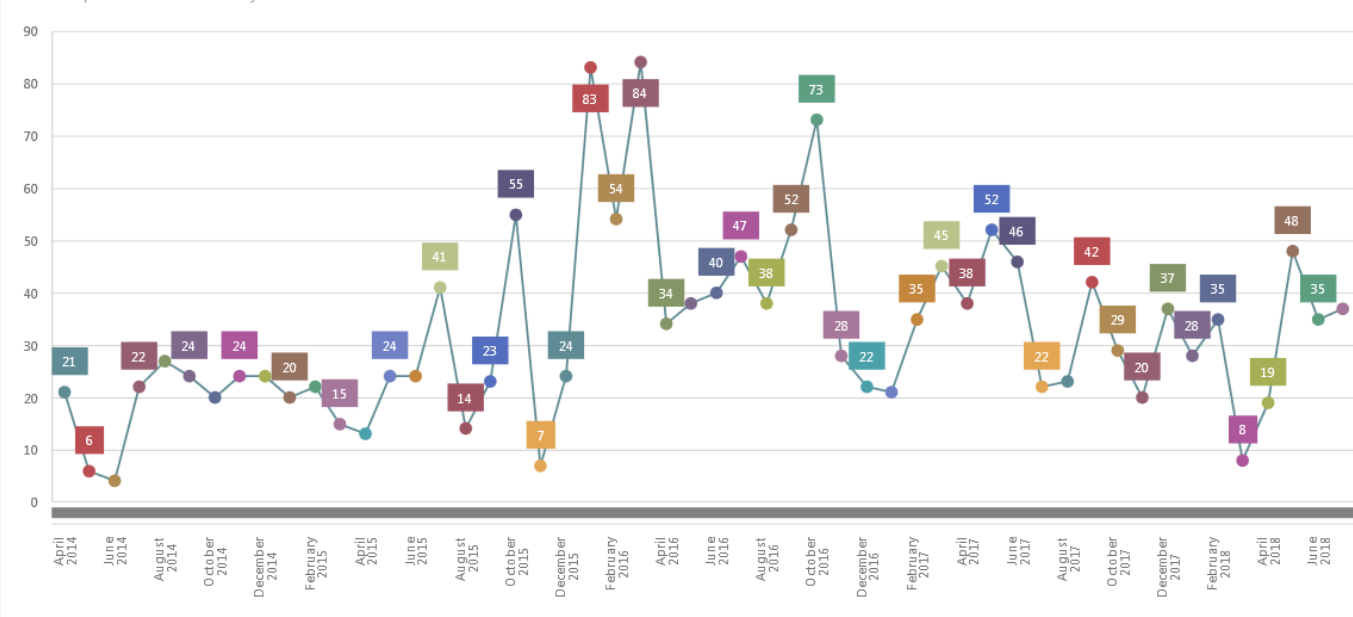
Office of the  
Chief Financial Officer

# Model Downloads



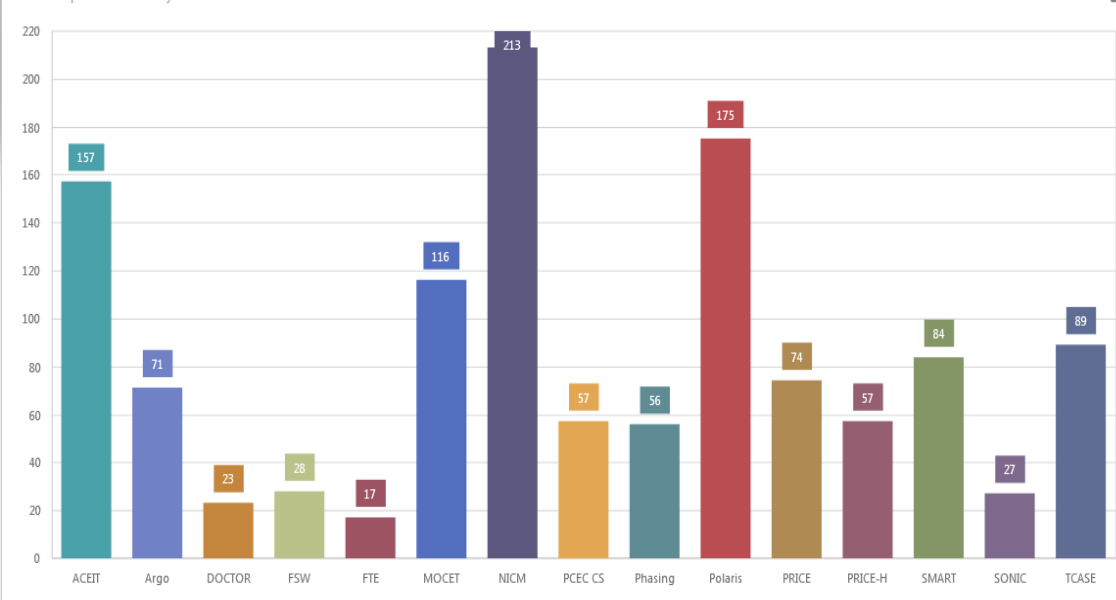
# Total Unique Model Downloads

Total Unique Model Downloads by Month



- **Top Unique Downloads:**
  - NICM\* (213) (\*Includes CS + Contractor)
  - Polaris (175)
  - ACEIT\* (156) (\*Includes JACS)
  - MOCET (116)
  - TCASE (89)
  - SMART (84)

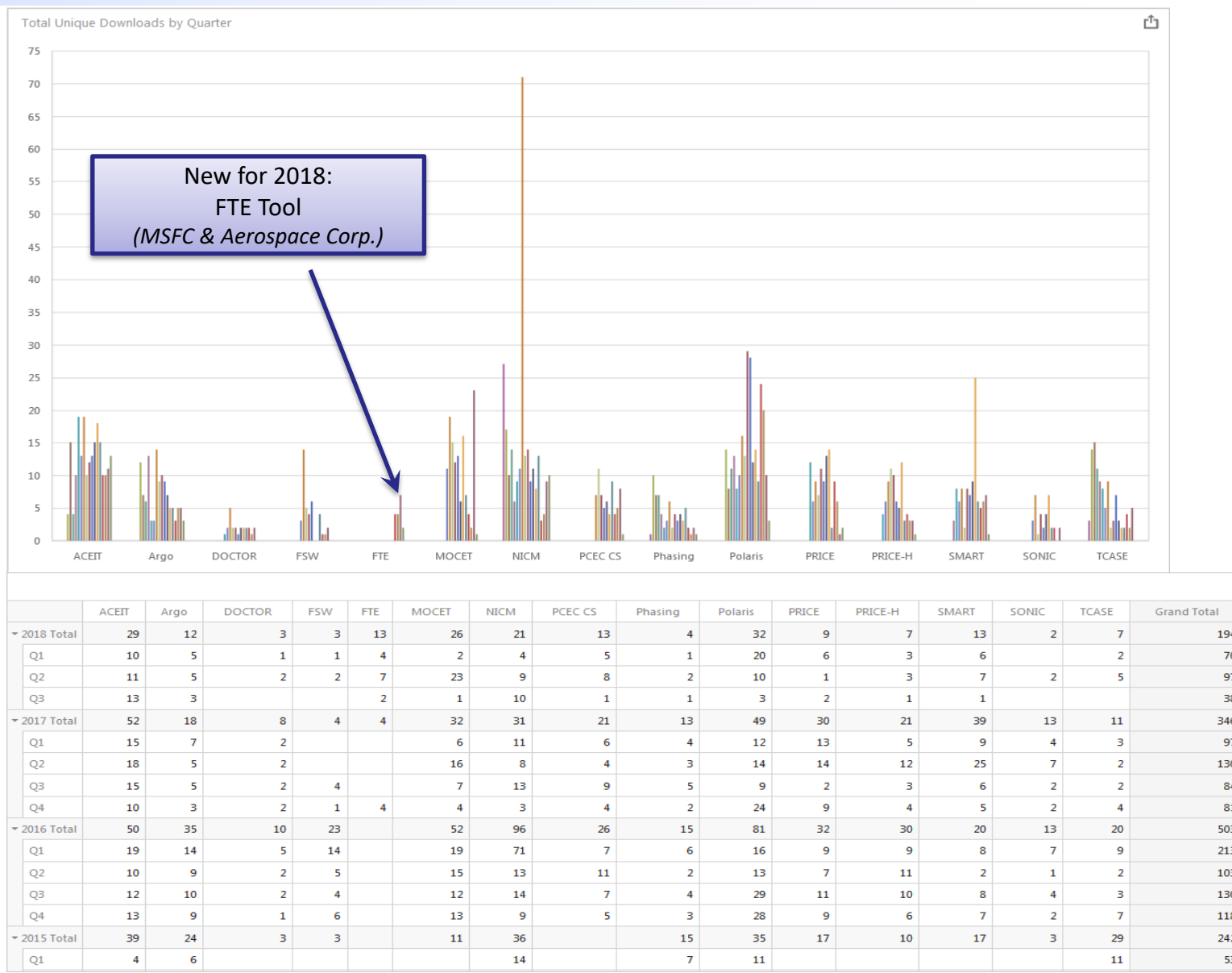
Total Unique Downloads by Name



- **1240 Total Unique Model Downloads**
- **Model Download trend is positive**
- **Updates to the Model Portal drive download spikes**

# Top Unique Downloads

- NICM — 213
  - Major update spike
  - NICM VIII release July 2018
- Polaris — 175
  - Update spike & Training
- ACEIT (JACS) — 156
  - Recent 7.5 SP2 Update (June 2018)
- MOCET — 116
  - Ver 1.3 Update spike
- TCASE — 89
  - Reducing?
- SMART — 84
  - Update spike (Q2 2017)
- PRICE TP — 74
  - +57 for PRICE-H



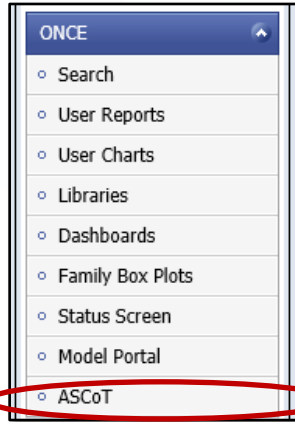
# ONCE Numbers Summary

- **Total CADRe = 481**
  - 2018 = +27, 2017 = +26, 2016 = +41
- **Total Projects = 157**
  - 2018 = +15, 2017 = +9
- **Total User = 523**
  - 2018 = +55, 2017 = +70, 2016 = +138
- **Total Size = 65k (+10k) documents and 218GB (+45GB)**
  - CADRe Library and Symposium Library most popular
- **Total Model Downloads = 1240**
  - Top Models are: NICM, Polaris, ACEIT, TCASE, SMART, MOCET



# ONCE 2018 ENHANCEMENTS

# ASCoT – Flight SW Model on the Web



- **ASCoT Overview**

- **Analogy Software Costing Tool**
- Estimate Robotic Flight Software
  - Dev Effort Duration, Dev Cost, SLOC
- Suite of Methods
- Includes Database

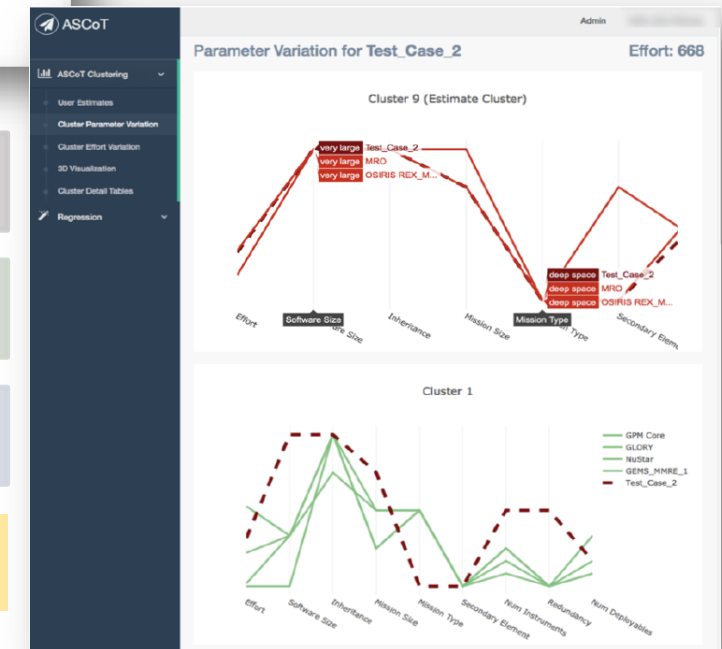
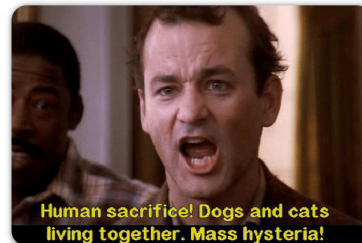
- **ASCoT/ONCE Details**

- Successful deployment of Django and Python on ONCE to support ASCoT
- *Windows & Open Source living together!*
- Single sign-on
  - Log into ONCE, access and run ASCoT
- “ONCE Model Portal v2.0”

- **Now Available to All Users**



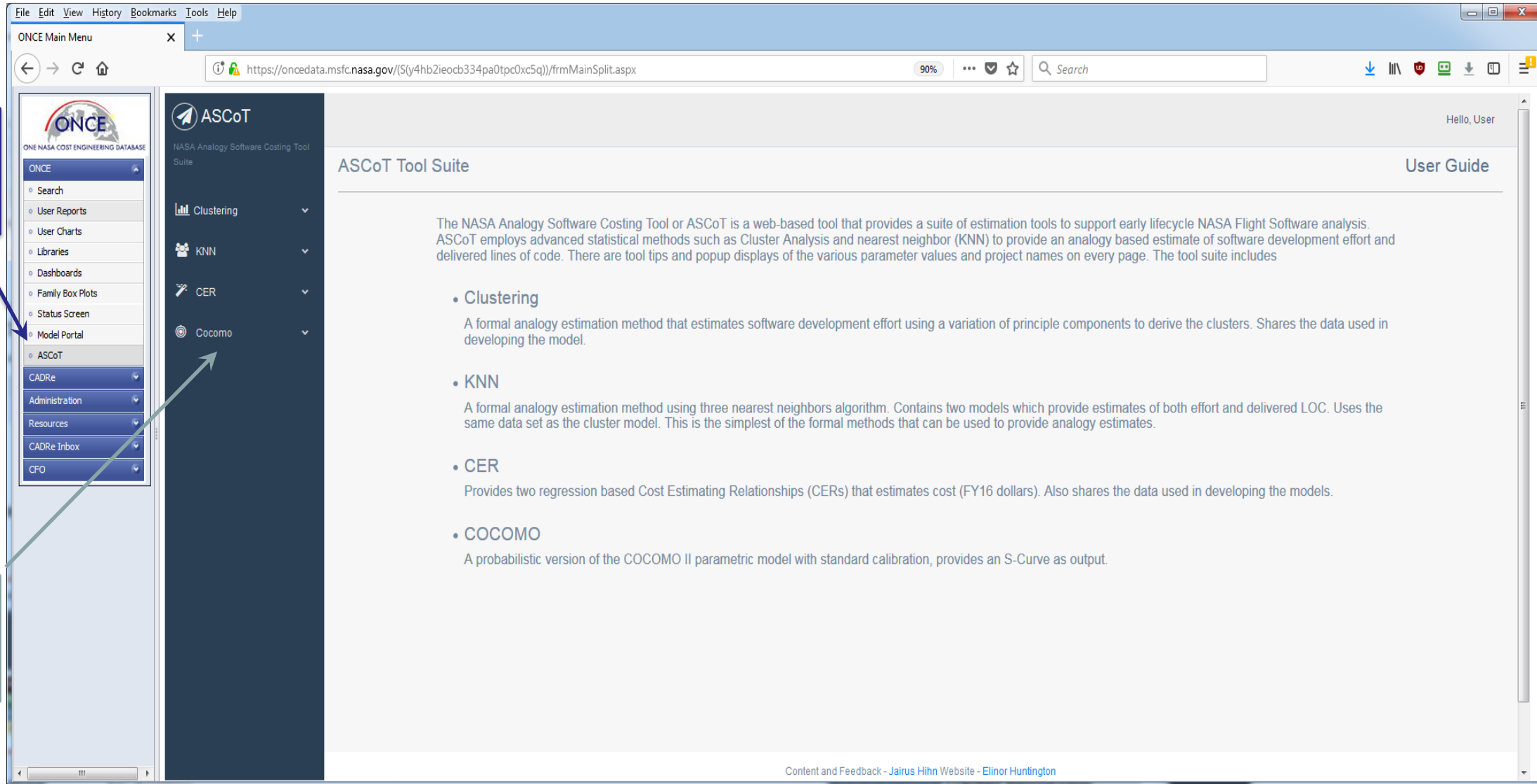
Cluster Analysis	<ul style="list-style-type: none"> <li>• Spectral Clustering</li> <li>• Development Effort Estimate</li> </ul>
Regression Analysis	<ul style="list-style-type: none"> <li>• Linear Regression</li> <li>• Development Cost Estimate</li> </ul>
COCOMOII	<ul style="list-style-type: none"> <li>• Verified Reproduction</li> <li>• SLOC/Cost/Effort</li> </ul>
K_NN	<ul style="list-style-type: none"> <li>• K Nearest Neighbor</li> <li>• Development Effort Estimate</li> </ul>



# ASCoT Home Screen

ASCoT menu  
item opens  
Home Screen

Additional Left-  
Hand Nav for  
ASCoT



The screenshot shows the ASCoT Home Screen in a web browser. The browser's address bar displays the URL: [https://oncedata.msfc.nasa.gov/\(S\(y4hb2ieocb334pa0tpc0xc5q\)\)/frmMainSplit.aspx](https://oncedata.msfc.nasa.gov/(S(y4hb2ieocb334pa0tpc0xc5q))/frmMainSplit.aspx). The page features a dark blue sidebar with the ONCE logo and a list of menu items: ONCE, Search, User Reports, User Charts, Libraries, Dashboards, Family Box Plots, Status Screen, Model Portal, ASCoT, CADRe, Administration, Resources, CADRe Inbox, and CFO. The ASCoT menu item is highlighted. The main content area is titled "ASCoT Tool Suite" and includes a "User Guide" link. The text describes the ASCoT tool as a web-based tool for NASA Flight Software analysis, providing estimation tools like Clustering, KNN, CER, and COCOMO. The footer contains the text: "Content and Feedback - Jaius Hihn Website - Elinor Huntington".

ASCoT menu item opens Home Screen

Additional Left-Hand Nav for ASCoT

ASCoT Home Screen

ASCoT Tool Suite

The NASA Analogy Software Costing Tool or ASCoT is a web-based tool that provides a suite of estimation tools to support early lifecycle NASA Flight Software analysis. ASCoT employs advanced statistical methods such as Cluster Analysis and nearest neighbor (KNN) to provide an analogy based estimate of software development effort and delivered lines of code. There are tool tips and popup displays of the various parameter values and project names on every page. The tool suite includes

- **Clustering**  
A formal analogy estimation method that estimates software development effort using a variation of principle components to derive the clusters. Shares the data used in developing the model.
- **KNN**  
A formal analogy estimation method using three nearest neighbors algorithm. Contains two models which provide estimates of both effort and delivered LOC. Uses the same data set as the cluster model. This is the simplest of the formal methods that can be used to provide analogy estimates.
- **CER**  
Provides two regression based Cost Estimating Relationships (CERs) that estimates cost (FY16 dollars). Also shares the data used in developing the models.
- **COCOMO**  
A probabilistic version of the COCOMO II parametric model with standard calibration, provides an S-Curve as output.

Content and Feedback - Jaius Hihn Website - Elinor Huntington

# Actual vs Estimated Cost



- The CADRe information is collected at a point in time
  - Project Milestones such as CSR/SRR, PDR, CDR, SIR, and Launch
- When the CADRe is built, some of the cost captured in Part C is actual (sunk) while other is estimate (to-go):

CADRe Part C  
Estimated vs  
Actual column  
headers

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
2	Report As of Date:	2 Aug 2017																					
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10	1.0	Project WBS Elements	Level																				
11	2.0	Project Management	2																				
12	3.0	Systems Engineering	2																				
13	4.0	Safety and Mission Assurance	2																				
14	5.0	Science	2																				
15	6.0	Payload	2																				
16	7.0	Spacecraft	2																				
17	8.0	Mission Operations	2																				
18	9.0	Launch Vehicle	2																				
19	10.0	Ground Systems	2																				
20	11.0	Systems Integ. & Testing	2																				
21		Education & Public Outreach	2																				
22		Contingency	2																				
23		Subtotal GSFC Only	2																				
24		Suballotments (excludes LV)	2																				
25		Total GSFC/Suballotments	2																				
26		HQ's LIFE	1																				
27		Total Mission	1																				

ONCE uses  
Yellow  
Highlight for  
Estimate  
(to-go)

ONCE  
User  
Reports  
Output  
Interface

Mission phased cost output (if selected on previous screen):

Export to Excel

☒ Real Year ☐ Base Year (2014\$)

☒ Estimated Costs

<sup>1</sup> Denotes Phase A/B costs phased programmatically by ONCE.  
<sup>2</sup> Denotes Phase C/D costs phased programmatically by ONCE.  
<sup>3</sup> Denotes Phase A/B and Phase C/D costs phased programmatically by ONCE.  
 \* Denotes all costs phased programmatically by ONCE.

			1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Phase E Total
Aqua	CADRePlus	Aqua-CADRe+	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,600,000	\$20,000,000	\$20,300,000	\$19,900,000	\$19,100,000	\$19,500,000	\$20,100,000	\$20,700,000	\$21,300,000	\$5,200,000	\$5,300,000	\$196,000,000

ONCE outputs to Excel  
also incorporate  
Yellow Highlight

	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF
2006											
\$0	\$0	\$24,600,000	\$20,000,000	\$20,300,000	\$19,900,000	\$19,100,000	\$19,500,000	\$20,100,000	\$20,700,000	\$21,300,000	\$5,200,000

# Human/Crewed Data Improvements

- **Current # of Human/Crewed CADRe's in ONCE: 22 (+11 since 2017)**
- **Current # of Crewed/Manned Projects: 13**
  - Ares I, CxP GO, CxP Integ, CxP MO, CxP EVA, CxP Prog, GSDO, MPCV Orion, SLS, VCAM, NORS, EFT-1, C2V2
- **Major Challenges:**
  - Inability to query between different projects
  - Minimal data available via ONCE database
  - Added tabs in CADRe Part B for various major HW elements
  - Different technical parameters captured
  - Significant usage of cell comments and “notes” with tech info
- **Data Expansions:**
  - ISS Modules & Elements

Different tech parameters on tabs for major HW elements

Vehicle Assembly Building			Note: Final Design is TBD as of GSDO SRR/SDR				
Data from GSDO Program (2012/2013)		New VAB data Provided by Alan Littlefield and Ed Muktarian (using Platform Study March 16, 2012 90% Solution)					
Components	Subsystem/Assemblies	Square Feet	Live Load Design (Lbs)	Dimensions	Mass (CBE)	Power (Electric)	
VAB	TOTAL Existing VAB	1,831,549 (Roo Space)		Footprint of main building - 456' x 512' Height of main building - 525' 0"		VAB weighs 130,000, 277,000 lbs. 400,000 lbs. 1,000,000 lbs.	
	High Bay 3	225,900					

Square Feet

Live Load Design (Lbs)

Dimensions

Mass (CBE)

Power (Electric Motors)

DEMOLITION Parameters	demolished)	360 Dead	Same loads (Platform E) or less at 6000 Lbs			1150
	Old Platform E (to be demolished)	4287 Area 2912 Dead	12000 lbs/ Max. total per level. <sup>1</sup> Same loads (Platform E) or less at 6000 Lbs			20 1150
	Old Platform E (to be demolished)	7087.6 Area	12000 lbs/ Max. total per level. <sup>1</sup>			20

System Level Params

Content Overview

Vehicle Assembly Building

Launch Complex 39B

Launch Complex 39A- (Mothball)

Mobile Ls ...

Launch Complex 39B								
Data provided by Allan Littlefield and Rich Smith								
System Components		Key TEC	Description	New/Modify/Refurbish/Existing/Demolish	Concrete (Cubic Yards)	Qty of Steel (tons)	Shape of Pad	Elevation above Sea Level
PAD 39B Existing Parameters <sup>1</sup>								
(PAD A and B are			Configured for SLS only		68,000	5100	8 Sided Polygon	55

New/Modify/Refurbish/Existing/Demolish

Concrete (Cubic Yards)

Qty of Steel (tons)

Shape of Pad

Elevation (ft above Sea Level)

	Deflector	Steel, roof-trussed with refractory concrete	To be Demolished				
	Environmental Control	One story construction. Serves as Distribution point for conditioning and purge gases	REFURBISH in Design				
	PAD Terminal Connection Room	Houses Electronic equipment for com between LCC and ML. Two Story, beneath sloping shoulder of pad. Covered with 20ft of fill	Refurbish in Work				
	High Pressure Gas Storage Facility	Reinforced concrete used to store nitrogen and helium for pressurize water systems - High pressure gas storage facility is used to	Refurbish in Work				

System Level Params

Content Overview

Vehicle Assembly Building

Launch Complex 39B

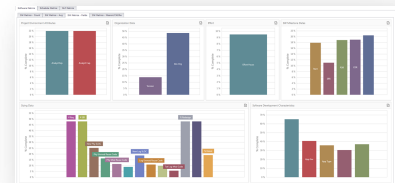
Launch Complex 39A- (Mothball)

Mobile Ls ...

# Moving to a Human/Crewed Database

- Data improvement task in 2018 toward a Human/Crewed database
- Historical CADRe's completed detailed process
- New Human/Crewed CADRe's will utilize improved CADRe template
- New Human/Crewed CADRe's will utilize improved ONCE import
- SQL Server Integration Service (SSIS) leveraged for Extract, Transform, and Load operations (ETL)
- Final result provides end-users with ability to create charts, reports, and queries on all data available in the CADRe

General Workflow Process for New Human/Crewed Capability

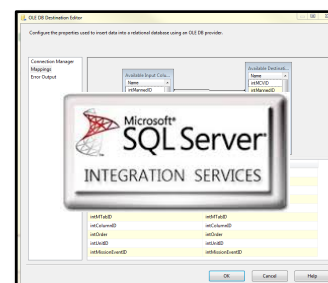


Launch Complex 300	System Components	Key Tech Description	Health/Status/Configuration	Comments/Status	Qty of Item (Total)	Stage of Prod	Location above Sea L
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300

Historical CADRe

Launch Complex 300	System Components	Key Tech Description	Health/Status/Configuration	Comments/Status	Qty of Item (Total)	Stage of Prod	Location above Sea L
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300

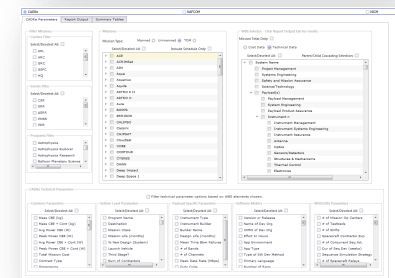
Consolidated File



SSIS Code

Launch Complex 300	System Components	Key Tech Description	Health/Status/Configuration	Comments/Status	Qty of Item (Total)	Stage of Prod	Location above Sea L
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300
Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300	Launch Complex 300

New SQL Db



# New Human/Crewed Capabilities in ONCE

- All data is now searchable and reportable in the database
- Includes both technical and cost data
- All technical fields are now listed
  - 450 Available Technical Fields with Definition Document
- Insight into “Element-Level” data for the first time
- Consistent structure for Human/Crewed CADRe’s
- Ability to compare across Human/Crewed CADRe’s
- New User Dashboards to support filter and export
  - CADRe Level example shown on following slide

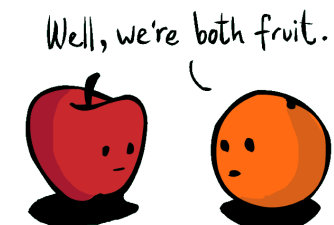
## ONCE User Reports with Human db

Missions

Mission Type: Human ☒ Uncrewed ☐ TDM ☐

Select/Deselect All: ☐ Include Schedule Only: ☐

<input type="checkbox"/> CxP ORION	SRR
<input type="checkbox"/> CxP ORION	PDR
▼ <input type="checkbox"/> CxP Program	
<input type="checkbox"/> CxP Program	SRR
▼ <input type="checkbox"/> EFT-1	
<input type="checkbox"/> EFT-1	SIR
▼ <input type="checkbox"/> EVA	
<input type="checkbox"/> EVA	SRR
▼ <input type="checkbox"/> GSDO	
<input type="checkbox"/> GSDO	SRR
<input type="checkbox"/> GSDO	PDR
▼ <input type="checkbox"/> MPCV Orion	
<input type="checkbox"/> MPCV Orion	PDR
<input type="checkbox"/> MPCV Orion	CDR
▼ <input type="checkbox"/> NORS	
<input type="checkbox"/> NORS	CADRePlus
▼ <input type="checkbox"/> SLS	
<input type="checkbox"/> SLS	SRR
<input type="checkbox"/> SLS	PDR
▼ <input type="checkbox"/> VCAM	
<input type="checkbox"/> VCAM	LRD







# Human CADRe Interface

## CADRe Level

Select the Human Mission CADRe

Available Milestones

Mission, Element, Sub-Element  
Click for Field Definitions

PDR Mass by Element

CDR Mass...

ID other Important Parameters

Human CADRe Level Data Dashboard

Mission		Basic Mass Total		C/GFE		Predicted Weight	
		PDR	CDR	CDR	PDR	CDR	
MPCV Orion	EFT-1	EFT-1 Total	46043.235 lbm				48118.663 lbm
		LAS	15931.741 lbm				16271.215 lbm
		CM	21192.121 lbm				22261.109 lbm
		BALLAST	136.7797 lbm	135.539 lbm	CFE	136.7797 lbm	135.539 lbm
		CONSUMABLES	108.5 lbm	124.3271 lbm	CFE	108.5 lbm	124.3271 lbm
		ECLSS 2	3.5 lbm			3.675 lbm	
		LRS 2	1221.058 lbm			1286.448 lbm	
		GN&C	73.1601 lbm	72.56378 lbm	GFE	75.757314 lbm	72.56378 lbm
		LRS	437.3122 lbm	460.8082 lbm	GFE	462.483 lbm	460.8082 lbm
		OTHER		-157.8437 lbm	CFE		-171.7144 lbm
		PAYLOAD		168.93901 lbm	CFE		168.93901 lbm
		POWER	519.918 lbm	417.527 lbm	CFE	525.1172 lbm	417.5498 lbm
		TPS 2	4.380 lbm			4.730 lbm	
		PROPELLANT	410.52 lbm	410.75 lbm	CFE	410.52 lbm	410.75 lbm
		PROPULSION	910.526 lbm	930.811 lbm	CFE	954.236 lbm	931.406 lbm
		SM	4318.271 lbm			4558.976 lbm	
		AVIONICS	637.6372 lbm	578.24883 lbm	CFE	665.6097 lbm	578.30383 lbm
		ECLSS	423.889 lbm	424.9880 lbm	GFE	450.030 lbm	424.9880 lbm
		SA	816.024 lbm			850.163 lbm	
		SAJ	2587.264 lbm			2740.965 lbm	
		MSA	1197.8114 lbm			1436.2332 lbm	
		DFI		925.034 lbm	GFE		930.311 lbm
		STRUCTURE 2	1175 lbm			1410 lbm	
		MECHANISMS	98.609 lbm	752.4451 lbm	CFE	753.229 lbm	752.6797 lbm
		PTC	83.564 lbm	64.95 lbm	CFE	92.722 lbm	64.95 lbm
	STRUCTURE	762.9978 lbm	793.2717 lbm	CFE	790.1516 lbm	794.0208 lbm	
	TPS	982.119 lbm	933.933 lbm	GFE	6454.274 lbm	934.301 lbm	
	WIRING	23.9 lbm	7.9237 lbm	CFE	28.68 lbm	7.9237 lbm	
EM-1	EM-1 Total		71083.59828 lbm				73828.9124 lbm



# Human CADRe Interface

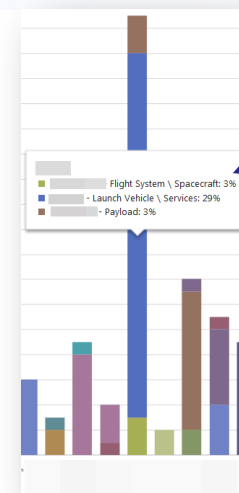
## CADRe Level – Field Definitions

- Document describing all available Human data fields with definitions
  - Work In Progress
- Come help us fix/improve
  - ONCE Breakout Session
- Identify key data fields
- Research definitions
- Current Draft = 10+ Pgs



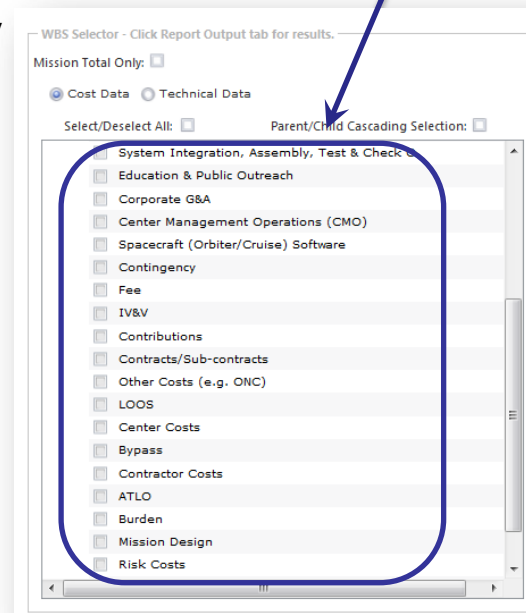
# Additional Data Enhancements

- ONCE Team completed detailed review of Launch Vehicle Cost allocation in the Lifecycle Phases
  - All CADRe's included with focus on the Lifecycle Phase cost allocations (A/B/C/D/E)
  - Prior identification by NASA CS of “odd” LV cost allocations to Phase E
    - “Odd” = A large amount of \$ of the LV cost was allocated to Phase E, which deserves further review
  - Review expanded to include LV, Spacecraft, and Payload allocations to Phase E
  - Users that often report cost by Phase B/C/D/E should see significant improvements
  - New Phasing by Element Dashboard for ONCE Administrators to monitor going forward
- Cleanup of WBS specification for Contingency/Reserves values
  - All CADRe's included with focus on correcting the WBS specification for either Contingency or Reserve values captured in the Part C
  - Reduces confusion and cleans up WBS tree in User Reports menu item
- Cleanup of all WBS elements shown on User Reports screen
  - Easier to create and select elements for new reports; also improves report output results
- Identified and corrected inconsistencies in Instrument element type assignments
  - Review of instruments by type and over-time (SRR, PDR, CDR, etc.)
- Identified and completed Instrument Mass review
  - Added some missing Mass data from CADRe source files



Ex: 30% of  
Project LV cost  
in Phase E

Cleanup of WBS  
Elements for  
User Reports



# Conclusion

- **ONCE growth reflects the importance of the data to a wide audience:**
  - More than 500 users, 60% NASA CS
  - 200+GB of data / 65K files
  - 20+ Projects with CADRe's downloaded over 1,000 times
- **Capabilities for users continue to increase:**
  - Online Web Models like ASCoT
  - Human/Crewed database
  - New and updated models/tools for the Model Portal
  - Enhancements to improve data quality and insight
- **New/Upcoming:**
  - *{spooky music}* Amazon Web Services...stay tuned...



# **COME TO OUR BREAKOUT SESSION!**

**We are going to:**


- Talk about Human Database more**
- Solicit feedback on important Parameters**
- Show draft Dashboards and discuss issues**
  - Hold Open Q&A with ONCE Team**
  - Other “Crowdsource” discussions**

# New NAMS Form

The ONCE Access request form in NAMS has been improved over the previous version.


- Added request type to delineate between ONCE and QUIK users.
- Added listing of primary reason for access to ONCE.
- Expanded the terms and conditions – specifically addressing unauthorized access to ONCE or data retrieved.

NOTE: Basic Active Directory -AGCY0012 is a prerequisite for this application. If you do not have a Basic Active Directory account, a NAMS request will be automatically submitted with this request.


Urgency 


☐ Normal ☒ Priority ☐ Emergency

Request Type: Select Type of Access Request

None 


NOTE: Provide a legitimate business justification for access to historical cost, schedule and technical data.


\* Business Justification 


Special Instructions 


UserID

Account Type of  on




\* Primary Reason for Access (select from drop down text) 


None Selected 


Select Options 

HQ OCFO SID Only


HQ OCFO SID Supervisor Name (Provide name of approving supervisor from HQ OCFO SID) 


Contractor Only

Company Name 

Contract number 

GS-23F-8006H

Contract Expiration Date 

Government Sponsor 

Eric Plumer

Click here to indicate that your contract with NASA includes clause 1852.237.72, Access to Sensitivity Information.

☐




As a condition of receiving access to ONCE and the NASA historical cost, schedule, and technical data the requestor certifies that they:

- **NASA Use Only**
  - Agree to use the data within ONCE for the purpose of performing work for NASA and that Contractors will only use the data when performing work on contract for NASA.
- **Eligible Users**
  - Agree they are a NASA employee, or an employee of an approved contractor company.
  - Agree they are not a university student, nor employee of an aerospace hardware prime contractor company.
- **Accounts and Monitoring**
  - Agree that by accessing ONCE you are consenting to monitoring and recording with no expectation of privacy.
  - Agree to abide by the Security of Information Technology Procedures and Guidelines (NASA NPG 810.1)
  - Understand that misuse of assigned accounts, sharing accounts, or accessing the accounts of others is not permitted.
- **Controlled Technical Data**
  - Agree not to disseminate or share controlled technical data in a manner that would violate applicable U.S. Export Control laws and regulations.
  - Agree that they have not been debarred, suspended, or otherwise deemed ineligible to perform work on U.S. Government contracts, or have previously violated U.S. Export Control laws.
  - Acknowledge their individual responsibilities under applicable U.S. Export Control laws and regulations - including the obligation, under certain circumstances, to obtain an export license from the U.S. Government prior to the release of controlled technical data within the United States.
- **Model Portal**
  - Agree to follow the applicable license agreements for software models and tools that are available for download on the ONCE Model Portal.
  - Agree to not share the software models and tools outside of the ONCE Model Portal or in violation of the posted guidelines or license restrictions.
- **OCFO Data**
  - Agree to only access OCFO data with a legitimate business justification and prior approval from a HQ OCFO SID supervisor.

Unauthorized access or use of ONCE may subject you to disciplinary action or criminal prosecution. Failure to abide by these conditions may constitute grounds for termination of access privileges or suspension of your ONCE account.

\* Users agree to the terms and conditions above

☐

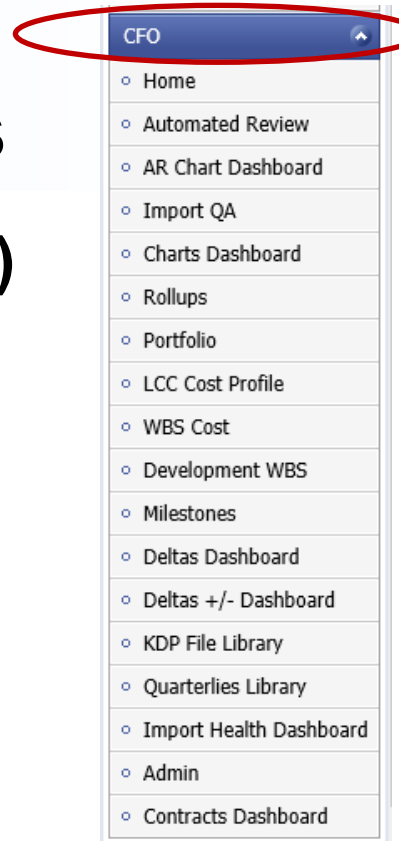
  



# CFO SID Only

## QUIK – Quarterly Information and KDPs

- **SID previously operated the C&S Db (Cost & Schedule Database)**
  - CAD joined SID in 2016 and began leveraging ONCE to help SID
- **Goal: Utilize capabilities of ONCE to quickly enhance the availability of Project Quarterly data**
- **Source Data: Consolidated Quarterly data sheets by Project**
  - Approximately 51 Projects
  - Quarterly data back to approx. FY2007Q1
  - 964 individual quarterly datasheets
- **What is QUIK? Automated import, analysis, and review of Quarterly Datasheets**
  - Online SQL database that leverages the CADRe/ONCE architecture
  - Supports automated review, import, analysis, and visualization of Quarterly data
  - Provides a controlled and authoritative file library of Quarterlies and other valuable information
  - Multiple dynamic outputs, charts, and dashboards with full export to MS Excel/PDF/Image
  - Integration with NASA IDMax/NAMS and NDC for user credentials and permissions





# QUIK – Automated Review & Import QA

QUIK is currently performing 2 primary functions:

- Automated Review of new incoming
- Archive & analysis of historical

2-Stage Import Process

- Automated Review
- Import QA

AR yields Import Metrics with exceptions flagged

- AR Import Metrics Report

QA yields quantitative metrics on copy/verification

- QA Verification Receipt

## Stage 1 Import Metrics Report

**Quarterly Information & KDPs (QUIK)**  
**Automated Review Import Metrics Report**

FY/QTR: FY17 Q2  
# Projects Imported: 40

**Summary Count of Exceptions by Lifecycle Phase and Quarterly Datasheet Area**

	# of Projects with Exceptions in Summary Area	# of Projects with Exceptions in Cost Area	# of Projects with Exceptions in Schedule Area	# of Projects with Exceptions in Contract Area
Development	0	0	14	0
Formulation	0	0	1	1
Operations	0	0	0	0

**Detailed Summary of Exceptions by Lifecycle Phase and Quarterly Datasheet Area**

	Summary Exceptions	Cost Exceptions	Schedule Exceptions	Contract Exceptions	Date Loaded	Submittal Date	Template Version	Phase
ASTRO-H			TRUE		5/4/2017	2017-03-22	9	Development
CYGNSS					5/4/2017	2017-04-07	10	Development
Dawn			TRUE		5/4/2017	2017-03-22	9	Operations
DSAC			TRUE		5/4/2017	2017-03-22	10	Development
Euclid			TRUE		5/4/2017	2017-03-27	10	Development
GEDI					5/4/2017	2017-04-07	10	Development
GPM					5/4/2017	2017-03-22	10	Operations
GRACE FO					5/4/2017	2017-03-22	10	Development
GSDO - EGS			TRUE		5/4/2017	2017-03-31	10	Development
ICESat-2			TRUE		5/4/2017	2017-03-22	10	Development
ICON					5/4/2017	2017-03-22	10	Development
InSight			TRUE		5/4/2017	2017-04-28	10	Development
James Webb Space Telescope			TRUE		5/4/2017	2017-03-31	10	Development
Juno					5/4/2017	2017-04-25	10	Operations
Landsat 8					5/4/2017	2017-03-22	10	Development
Landsat-9					5/4/2017	2017-03-22	10	Formulation
LCRD SCaN			TRUE		5/4/2017	2017-03-22	9	Development
LCRD STMD			TRUE		5/4/2017	2017-03-22	9	Development
LCRD+			TRUE		5/4/2017	2017-03-22	9	Development
Mars 2020 SMD					5/4/2017	2017-03-17	10	Development
Mars 2020+					5/4/2017	2017-03-17	10	Development
MMS					5/4/2017	2017-03-22	10	Operations
MOMA-MS			TRUE		5/4/2017	2017-03-22	10	Development
NISAR					5/4/2017	2017-03-27	10	Development
OCO-3					5/4/2017	2017-03-22	10	Development
Orion Program - Crew Vehicle			TRUE		5/4/2017	2017-03-31	10	Development
OSIRIS-REx					5/4/2017	2017-03-22	10	Operations
Radiation Budget Instrument (RBI)					5/4/2017	2017-04-10	10	Development
Restore-L			TRUE	TRUE	5/4/2017	2017-03-22	10	Formulation
SAGE III					5/4/2017	2017-03-22	10	Development
SMAP					5/4/2017	2017-03-22	10	Operations
SOFIA					5/4/2017	2017-03-22	9	Operations
Solar Orbiter Collaboration					5/4/2017	2017-03-22	10	Development
Solar Probe Plus (SPP)					5/4/2017	2017-03-22	10	Development

Thursday, May 04, 2017 04:23 PM Page 1 of 55

## Stage 2 Verification Receipt

**Quarterly Information & KDPs (QUIK)**  
**Import QA Verification Receipt**

A value of less than 100% indicates that not all data in the datasheet has been correctly copied to the database and verified. Check the Import QA Verification Data tabs in QUIK or the mission specific portions of the Verification Receipt to narrow down the specific field which was not copied correctly. Data that is not in the correct format will not be copied correctly (e.g. Text in place of Date, Text in place of Number).

FY17 Q2  
Quarterly Summary Verification %: 72.2% 40 Total Projects

**Average Verification Percentages by Lifecycle Phase and Quarterly Datasheet Area**

	Summary	Cost	Sch-Milestone	Sch-Mgmt	Sch-Agency	Contract	Total
Development	73.6%	100.0%	71.2%	84.4%	77.4%	32.6%	73.2%
Formulation	75.0%	100.0%	76.9%	88.5%	61.5%	97.2%	83.2%
Operations	67.7%	100.0%	55.8%	68.3%	68.3%	33.3%	65.6%

**Detailed Summary of Verification Percentages by Quarterly Datasheet Area**

	Summary	Cost	Sch-Milestone	Sch-Mgmt	Sch-Agcy	Contract	Total
ASTRO-H	66.7%	100.0%	5.6%	88.9%	88.9%	0.0%	58.3%
CYGNSS	66.7%	100.0%	92.3%	92.3%	92.3%	0.0%	73.9%
Dawn	66.7%	100.0%	84.6%	84.6%	30.8%	0.0%	61.1%
DSAC	58.3%	100.0%	57.1%	35.7%	0.0%	0.0%	41.9%
Euclid	66.7%	100.0%	23.1%	76.9%	76.9%	0.0%	57.3%
GEDI	66.7%	100.0%	92.3%	92.3%	92.3%	0.0%	73.9%
GPM	66.7%	100.0%	61.5%	23.1%	23.1%	100.0%	62.4%
GRACE FO	66.7%	100.0%	100.0%	100.0%	100.0%	0.0%	77.8%
GSDO - EGS	100.0%	100.0%	0.0%	84.6%	84.6%	100.0%	78.2%
ICESat-2	83.3%	100.0%	76.9%	92.3%	76.9%	94.4%	87.3%
ICON	66.7%	100.0%	84.6%	84.6%	84.6%	0.0%	70.1%
InSight	66.7%	100.0%	84.6%	84.6%	84.6%	100.0%	86.8%
James Webb Space Telescope	66.7%	100.0%	46.2%	46.2%	76.9%	100.0%	72.6%
Juno	66.7%	100.0%	76.9%	76.9%	76.9%	66.7%	77.4%
Landsat 8	66.7%	100.0%	100.0%	100.0%	100.0%	0.0%	77.8%
Landsat-9	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	94.4%
LCRD SCaN	83.3%	100.0%	84.6%	84.6%	23.1%	0.0%	62.6%
LCRD STMD	83.3%	100.0%	84.6%	84.6%	23.1%	0.0%	62.6%
LCRD+	75.0%	100.0%	84.6%	84.6%	23.1%	0.0%	61.2%
Mars 2020 SMD	83.3%	100.0%	100.0%	100.0%	100.0%	88.9%	95.4%
Mars 2020+	75.0%	100.0%	92.3%	100.0%	100.0%	0.0%	77.9%

Generated: May 04, 2017 04:26 PM Page 1 of 45

# QUIK Example Dashboard – Reporting Portfolio

